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FUNCTIONALITY OF EXTENSION ACTIVITIES AMONG RICE FARMERS' COOPERATIVES IN DELTA STATE, NIGERIA

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ABSTRACT

This study appraises the functionality of extension activities among rice farmers in Delta State, Nigeria. Both purposive and random sampling techniques were used to generate a sample size of 140 respondents. Results revealed that the majority of respondents (> 90%) got information from fellow farmers and cooperative members. It was also discovered that members were satisfied with annual meetings ($\bar{x}$ = 3.50), monthly contributions ($\bar{x}$ = 3.47), interest rate ($\bar{x}$ = 3.21), loan payback ($\bar{x}$ = 3.21), partnerships with other cooperatives ($\bar{x}$ = 3.20), training sessions ($\bar{x}$ = 3.19) and joint farm maintenance ($\bar{x}$ = 2.90). The chi-square test revealed that significant differences occurred between age and constraints ($\bar{x}$ = 12.76; $p < 0.05$). It was concluded that majority of the perceived limitations confronting extension activities must have dwindled their efforts and resulted in their poor functionalities. It is recommended that there should be sustainable practice of extension workers' capacity building, particularly in rice production.

Contribution/Originality: The study was able to assess how cooperative members organize periodic training sessions for themselves instead of depending on the extension workers from the government. Commendable self-help efforts by farmers and cooperative management techniques.

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1. INTRODUCTION

Agriculture is a vital sector of the Nigerian economy but it has been developing at a very low rate. This is because 80% of the farming activities are done on a small scale (World Bank, 2018). Farmers use obsolete technology and are themselves unskilled. Arable farmland in the Niger Delta area of Nigeria range between 0.1 and 2.0 hectares (Ovharhe, 2019) and includes rice cultivation. Rice grown worldwide contributes to income generation and food security (Chaubey, Prakash, Yadav, & Singh, 2018).

Nigeria currently produces the highest quantity of rice in West Africa, with an average of over 3.2 million tons and ranked is ranked between 1– 15 worldwide (WARDA, 2019). Attah (2012) reported that Nigerian's rice consumption jumped from 2.9 kg from 1970 – 74 to 24.7kg from 1995 – 2000. Rice farming in Nigeria rose from 2.4 million metric tons in 1994 to 3.8 million metric tons in 2007 (Ajala & Gana, 2015). This is below the average Nigerian

rice demand of 7 million tons of rice per year representing 9% of caloric intake (Russon, 2019). Across the African continent, according to the African Development Bank, about $35 billion is expended on rice imports per annum (Russon, 2019).

Rice is an increasingly imperative crop in Nigeria. It is easy to harvest and prepare for sale, and for household consumption. To meet the increasing demand, milled rice was introduced to bridge the gap between the domestic demand and supply with various implications on the Nigerian economy (USDA, 2019; WARDA, 2019). Ajala and Gana (2015) reported that the country has five different rice environments or ecologies and potential land space for rice farming of between 4.6 and 4.9 million hectares. Only 1.8 million hectares (37%) of the 4.9 million hectares of Nigeria's total land mass of 120 million hectares is cropped by rice farmers. The sustainability of rice farming is being endangered by a combination of deteriorating soil fertility and increasing difficulties caused by pest- related diseases and weeds. Lack of knowledge on how to add value through appropriate storage processing and marketing also impedes rice production (Longtau, 2003; Tonukari, 2004). Bello (2010) stated that the goal of increased output can be attained by establishing functional cooperative societies in different areas of the community. Paddy rice is very also useful in animal feed production (Okpara, 2020).

Cooperatives can provide an economic boost to the community; however, they remain unpopular in Nigeria. Recently, employee cooperatives have started to gain momentum among the employed populace, who are unable to save portion of their income for future expenses. Until now, a cooperative society is seen to be an association for farmers, small traders and other very low-income earners. This drives home the issue of why quite a number of cooperative farmers are located in the southern part of Nigeria. Few farmers have knowledge of what a cooperative is, and its modals and functions in economic growth as a driving force for both large businesses and a robust government (Zopounidis, Kalogeras, Mattas, Van Dijk, & Baourakis, 2014).

Cooperatives epitomize a strong, lively and economic alternative designed to meet people's common needs. They are based on the powerful idea that groups and individuals can achieve targets together that none of them could achieve alone. Over a century, it has remained a means for people to exercise a level of control over their standard of living. They enable the attainment of grassroots and economic targets in a progressively competitive economy (Rural Finance and Investment (RFI), 2019).

The support of credit associations in Nigeria is essential due to the increased rate of poverty and lack of loanable finance (Ewubare, Aiie, & Akekere, 2008). According to Nigeria's most recent Living Standards Survey published in 2006 by Nigeria's National Bureau of Statistics, the poverty situation is serious and unemployment increasing steadily. Todaro and Smith (2003) opined that poor people's marginal savings, when observed from a holistic point of view, are not small; this high volume of savings poor people who usually constitute the target group of co-operatives can be overhauled and empowered into greater productivity.

Extension activities to rice are primarily concerned with imparting agricultural know-how to farmers who apply this knowledge gained from agriculture-related research as well as speaking about their difficulties to researchers or government agencies (Erie, 2009). Erie also noted that agricultural extension is an educational procedure designed for farmers to allow them to accept enhanced practices and by so doing increase their standard of living through their own efforts and using their own resources. Extension agents are described as major tools in the implementation of various projects designed by the Delta State Agricultural Rural Development Association (DARDA) in Nigeria to expand agricultural production and revenue for rural farmers (Agumagu & Nwaogwugwu, 2006). Attah (2012) emphasized that good quantity and quality of rice production is critical to ensuring food security. He further stated that rice is a significant crop whose surplus production would lead to export and thus attract foreign exchange earnings and consequently play a fundamental role in economic growth. Farmers' cooperatives are instituted by people in agreement to attain specific targets in business and are guided by extension workers (Khan, 2017). Cooperatives also offer cost effective services to one other and the general public and prevent exploitation of members through self-help projects and agricultural development.

Daokinal (2005) mentioned many agro-allied challenges associated with rice farmers, such as the high cost of improved varieties (mostly for rice), the high cost of inorganic fertilizer, and the high cost of agrochemicals. Again, a positive return to extension services arises because an extension system supports farm investors to be resilient in agribusiness regardless of business success or failure (Nguyen, 2020; Ovharhe, 2020). Sadly, the ecology is not being harnessed to its fullest potential, hence the need to offer various self-help resources for rice farmers.

The challenge is that many people do not participate in cooperative activities. To this end, perceived gaps existing between extension activities and rice farmers will be bridged using the following questions to gather data: What are the socioeconomic characteristics of rice farmers? What are the prevailing extension activities among rice farmers? Do rice farmers avail of self-help resources? What are the management techniques used by cooperatives? What are the problems facing the extension agents?

These research questions guided the specific objectives to:

i. Describe the socioeconomic characteristics of rice farmers.
ii. Appraise the extension activities among rice farmers.
iii. Introduce various self-help resources for rice farmers.
iv. Examine the various cooperative management techniques.
v. Determine the constraints facing extension activities.

1.1. Conceptual Framework for the Study

The conceptual mechanism for extension activities among rice farmers is typified in a tripartite model. On the first side are the basic agricultural extension activities, which are summarized into extension visits, distribution of farm inputs/assets, and capacity building. On the second side is cooperative management techniques that comprise members' mobilization, participation in rice farm project decision making, designing, planning, implementation, supervision and leadership directions. On the third side there are environmental components embracing the natural, social, capital, financial and governmental resources. These three pillars make up the tripartite paradigm for rice farmer cooperatives and extension activities (see Figure 1). The nucleus of these three pillars is the rice farmer, who is the central player and consequently affected by the positive or negative actions as indicated by three in-flow arrows separately. If a farmer is positively impacted by these tripartite pillars, they will potentially bring positive behavioral change, which will lead to an increase in productivity in rice farming among cooperative members and vice versa. Thus, behavioral changes of rice farmers (B) is a function of agricultural extension activities (E), cooperative management techniques (C) and environmental components (En).

Mathematically, this could be expressed as:

$$B = F (E + C + En)$$

Any slight changes in the respective attributes of the entities in parentheses must affect the farmers' behavior (B) in terms of an increase or decrease in productivity.

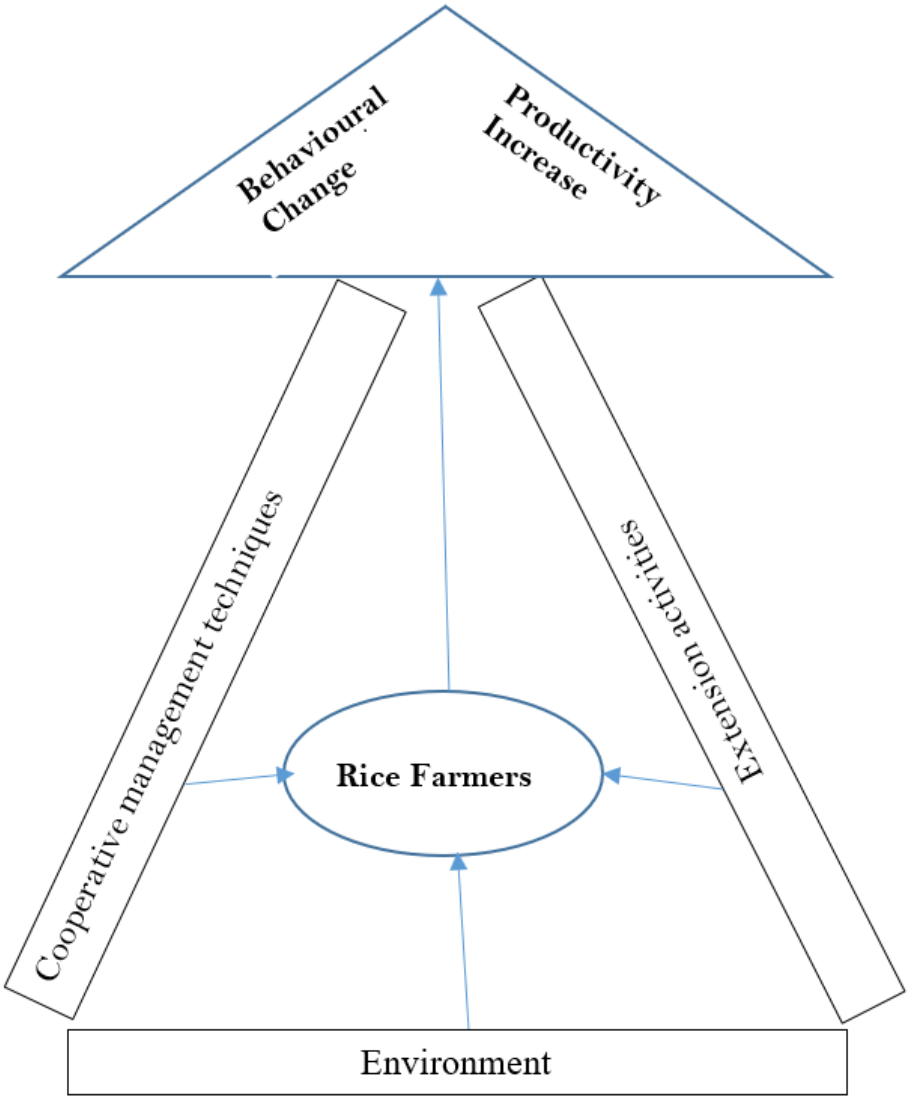

Figure 1. Tripartite paradigm for farmers' cooperative and extension activities.

2. MATERIALS AND METHODS

2.1. Study Area

The study was conducted in Delta State between October 2018 and May 2019. Delta State is positioned within longitudes 5° 50` and 6° 45` east of the Greenwich Meridian and latitudes 5° 25` and 6° 30` north of the equator (C-GIDD, 2016). It is an agrarian and oil mineral state.

2.2. Sampling Procedure

A two-stage sampling procedure was used for sample selection. Purposive sampling was used in the selection of the six available rice farmers' cooperative societies from the Delta North Agricultural Zone across six local government areas (LGAs) (Oshimili North, Aniocha North, Ika Northeast, Ndokwa East, Ndokwa West and Ukwani) where rice is mostly grown. Next, simple random sampling was used to select a minimum range of 20–25 respondents from each cooperative society per LGA. This brought a total useable sample size of 140 respondents (see Table 1). Data collected for this study was obtained with the use of a semi-structured and validated questionnaire designed with stated objectives and interview schedule.

Table 1. A two-stage sampling procedure for a sample size of 140 respondents.

S/N	LGA	Rice Farmers
1	Oshimili North	25
2	Aniocha North	24
3	Ika Northeast	22
4	Ndokwa East	25
5	Ndokwa West	21
6	Ukwani	23
Totals	6	140

Source: Field survey.

2.3. Instrument Validation and Reliability

The instrument for data collection was subjected to face and content validity, which accounts for the degree of accuracy of the instrument items. The reliability test was designed with test-retest reliability, which accounts for the degree of consistency of the instrument items using a micro test sample of 60 questionnaires distributed to the same respondents twice with an interval of two weeks (Odili & Ajua, 1995). The Pearson product-moment correlation coefficient (r) was used, and the correlation formula used for the test-retest is as follows:

$$r = \frac{N\sum xy - (\sum x)(\sum y)}{\sqrt{N\sum x^2 - (\sum x)^2\rceil \lceil N\sum y^2 - (\sum y)^2\rceil}}$$

Where:
r = correlation coefficient.
x = first administration.
y = second administration.
N = sampled number of respondents.
∑ = summation.
Note: The external reliability of the sampled result using the test-retest is in Table 2.

2.3.1. Correlation Results

There was a positive and significant correlation between the two variables (X and Y), where $r = 0.719$, $p \leq .001$, and n = 60 (see Table 2). There is a high degree of relationship between the first administration of the questionnaire (X) and the second administration of the questionnaire (Y) after an interval of two weeks.

Table 2. Correlation results on external validity of sampled result using test retest (n = 60).

Variable		X	Y
X	Pearson Correlation	1	0.719
	Sig. (2-tailed)		0.000*
	N	60	60
Y	Pearson Correlation	0.719	1
	Sig. (2-tailed)	0.000*	
	N	60	60

Note: Correlation is significant at *p < .001.

2.4. Measurement of Variables

The socioeconomic variables measured are gender, marital status, and income in Naira.

To gather further information, farmers were asked about relevant issues based on 'yes' or 'no' responses. If yes, the respondents were asked to state the number of extension contacts in the last month, quarter or year (measured by the number of times they had contact using a range of responses: 0–1 time, 2–3 times, 4–5 times, or others as applicable).

Regarding training activities for rice farmers by extension agents, respondents were asked to indicate whether they had received training in the last two years, and this was recorded at a nominal level as 'yes' or 'no'.

Again, 'yes' and 'no' were used for the distribution of farm inputs/assets, establishment of demo-plots, project monitoring and evaluation, and self-help efforts by rice farmers with relevant questions (where 1 = yes, and 0 = no).

To examine the strength of various cooperative management techniques applied by farmers, data collected were analyzed using a four-point Likert type scale (4 = Strongly Agree, 3 = Agree, 2 = Disagree, 1 = Strongly Disagree,

with a cut-off point of 2.5 for decision making). Values greater than or equal to 2.5 were considered strong cooperative management techniques and values less than 2.5 were considered invariably weak cooperative management techniques.

Similarly, regarding constraints related to extension activities perceived by the farmers, respondents were asked to state perceived limitations in conducting extension activities using a three-range scale (where 1 = not serious, 2 = serious, and 3 = very serious, with a cut-off point of 2.0 for decision making). Values greater than or equal to 2.0 were considered serious constraints and values less than 2.0 were considered invariably weak constraints. The index value (x) of constraints was also determined, where $0 < x \leq 1$.

2.5. Hypothesis Testing

Ho: There is no relationship between constraints experienced by rice farmers and some selected socioeconomic traits. This was addressed using a chi-square test based on the formula below (as applied by Tudor, Mihai, and Condei (2014)).

The formula for Chi square is:

$$\chi_c^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

where:

c = degrees of freedom

O = observed value(s)

E = expected value(s)

The stated methodology guided the research meaningfully.

3. RESULTS AND DISCUSSION

3.1. Socioeconomic Characteristics of Respondents

Table 3 presents the frequency distribution of the socioeconomic characteristics of rice farmers. The mean age of the respondents is 47 years, which suggests that majority of rice farmers in the study area are of a relatively energetic age. However, the youth category (< 40 years) comprised relatively few people.Ovharhe, Emaziye, Yarhere, and Enegesele (2021) lamented the poor attitude of youths towards agriculture as a result of migration. About 65.7% of the respondents were male, while 34.3% represented the female farmers. According to Imolehin and Wada (2000), the male dominance in this particular occupation might be due to the laborious nature of rice farming operations from tillage through to management, which their female counterparts cannot easily undertake.

Regarding marital status, the majority (93.6%) of the respondents were married, which suggests that there may be high demand for food and additional income as family size increases.

Based on the number of years spent in school, 57.1% of the respondents had 11–16 years of education. This implies that most rice farmers are educated and can understand and apply agricultural extension. This is confirmed by the findings of Ovharhe (2019), who ascertained that the more educated farmers are, the more receptive they are to agricultural information and applicability.

The majority (79.3%) of the respondents had 2–3 hectares of farmland, while 10.0% of the respondents had 4–5 hectares. The average farm size of rice farmers in the study area was 2.3 hectares, which reflected upon their average *annual farm income* (₦ 175, 000.00). This implies that they are small-scale farmers. Achoja and Nwokolo (2021) opined that small-scale farmers need credit support from financial institutions to expand their farming activities. This discovery is also in agreement with Ovharhe (2019), who asserted that the average farm size of farmers in some Niger Delta States is between 2–3 hectares.

As indicated in Table 3, the primary sources of information were through fellow farmers (97.9%), friends and neighbors (97.1%), and cooperative societies (92.9%). This result is in agreement with the findings of Yahaya and Omokhafe (2001), who reported that social interaction will enhance diffusion of information among farmers.

3.2. Extension Activities to Farmers

The results in Table 4 show the various extension activities of farmers over the past year. They reveal that 24.29% of the farmers were visited by extension agents. This implies that about 75% were not visited. About 15.00%, 13.57%, 11.43% and 10% of the farmers had received training, farm input support, demo plot establishment, and focus group discussions, respectively. In the same vein, 7.86% and 0% of farmers attended monthly extension meetings and agricultural exhibitions, respectively. These are indicators of very poor agricultural extension activities among rice farmers.

Agbamu (2005) suggested that the ratio of extension agents for farmers is insufficient in Nigeria. This was confirmed by the values in Table 3, which indicate that only 25.7% of respondents obtained information from extension workers. The summarized average for extension activities in the past year was 11.74%, which is very poor. On the contrary, Ovharhe (2016) reported that cassava farmers (52%) benefited from the activities of extension workers in Delta State. This is true to reality since the volume of cassava production is far higher than rice in the same state. Okpara (2020) reported the need for frequent training of extension agents in Delta State to improve the quality of extension advice given to farmers.

Table 3. Respondents' socioeconomic characteristics of rice farmers (pooled n = 140)

Variable	Frequency	Percent	Mean/Mode
Age (years)			
25–34	16	11.4	47 years
35–44	35	25.0	
45–54	49	35.0	
55–64	36	25.7	
65–74	4	2.9	
Sex			
Female	48	34.3	Male
Male	92	65.7	
Marital status			
Single	8	5.7	Married
Married	131	93.6	
Single again	1	0.7	
Number of years spent in school			
Less than 5	15	10.7	16 years
5–10	42	30.0	
11–16	80	57.1	
Above 16	3	2.2	
Farm size (hectares)			
Less than 2	15	10.7	2.3 hectares
2–3	111	79.3	
4–5	14	10.0	
Farm income per annum (₦)			
50,000–150,000	38	27.1	₦175,000.00
151,000–200,000	80	57.1	
201,000–250,000	22	15.7	
Sources of information (multiple responses recorded)			
Extension agents	36	25.7	Fellow farmers
Research institutes	2	1.4	
Friends and neighbors	136	97.1	
Radio	14	10.0	
Television	3	2.1	
Fellow farmers	137	97.9	
Town criers	0	0.0	
Newspapers/magazines	24	17.1	
Internet	8	5.7	
Cooperative societies	130	92.9	

Source: Field survey.

Table 4. Responses according to extension activities rendered to farmers (n = 140).

Extension activities (in the past year)	Frequency*	Percentage (%)
Extension agent visits	34	24.29
Farm inputs/asset supply	21	15.00
Extension training	19	13.57
Demo plot establishment	16	11.43
Focus group discussions	14	10.00
Extension farmers' monthly meetings	11	7.86
Agricultural exhibitions	00	0.00
Percentage mean = 11.74%		

Source: Field survey.
Note: * Multiple responses recorded.

3.3. Self-Help Efforts by Rice Farmers

Table 5 presents the various self-help efforts made by rice farmers. The results indicate that almost all respondents (99.3%) carried out sourcing and procurement of planting materials follow by a majority of 97.9% who were involved in land preparation, processing and market strategies. Combined pest/disease management strategies were used by 86.4% of farmers, 90.0% took local training courses on rice productivity, and 84.3% used self-help resources through cooperatives. Respondents' involvement in combined pest/disease management strategies, cooperative funding, and land ownership were positive through a group approach. The high percentage of self-help efforts made by farmers in all areas except land lease confirms that the majority of the farmers' success stories were not tied to the functionality

of agricultural extension activities. The overall self-help efforts mean percentage of 82.87% is encouraging. Ovharhe and Gbigbi (2017) reported positive performance among water yam farmers through self-help group activities.

Table 5. Rice farmers' self-help efforts.

Self-help efforts	Frequency*	Percent
Procurement of planting materials	139	99.3
Land preparation	137	97.9
Processing	137	97.9
Market strategies	137	97.9
Local training	126	90.0
Combined pest/disease management strategies	121	86.4
Cooperative funding	118	84.3
Land ownership	107	76.4
Percentage mean = 82.87%		

Source: Field survey.
Note: * Multiple responses recorded.

3.4. Cooperative Management Techniques Engaged by Farmers

Table 6 shows the various cooperative management techniques used by farmers who took part in the study. Out of the 12 cooperative management techniques that were examined in the study, nine of them were agreed to be important and satisfactory (regular annual general meetings ($\bar{x}$ = 3.50), regular monthly meetings ($\bar{x}$ = 3.49), monthly contributions ($\bar{x}$ = 3.47), satisfaction with the interest rate ($\bar{x}$ = 3.21), prompt loan payback ($\bar{x}$ = 3.21), partnerships with other cooperatives ($\bar{x}$ = 3.20), periodic member training sessions ($\bar{x}$ = 3.19), joint farm maintenance ($\bar{x}$ = 2.90), and penalty on late payment of loans ($\bar{x}$ = 2.62). Regular annual general meetings ($\bar{x}$ = 3.50) was agreed to be the most important cooperative management technique, while annual leadership tenure ($\bar{x}$ = 1.57), partnership with the government ($\bar{x}$ = 1.49), and insurance schemes ($\bar{x}$ = 1.27) were the least important. These results are in line with those of Ajayi, Muhammed, Tsado, Jibrin, and Olorunshola (2015), who stated that annual leadership tenure was not an important cooperative management technique among famers. There is a need to increase partnerships with the government to develop various incentives, such as encouraging farmers to partake in insurance schemes and training on the value of by-products from rice production for use in livestock feed production on a small scale, which will help to increase food security (Okpara, 2020). Ovharhe, Oyibo, and Alakpa (2016) reported how farmers partnered with the government through participation in the Fadama III project through which farmers were trained on the use of rice by-products for livestock feed.

Table 6. Respondents' cooperative management techniques engaged by farmers.

Cooperative Management Techniques	SD (1)	D (2)	A (3)	SA (4)	Total Score	Mean	Remark
Regular annual general meetings	7 (7)	14 (28)	18 (54)	101 (401)	490	3.50	Satisfactory
Regular monthly meetings	2 (2)	11 (22)	44 (132)	83 (332)	488	3.49	Satisfactory
Monthly contributions	10 (10)	15 (30)	42 (126)	73 (292)	485	3.47	Satisfactory
Satisfaction with the interest rate	12 (12)	10 (20)	54 (162)	64 (256)	450	3.21	Satisfactory
Prompt loan payback	10 (10)	16 (32)	49 (147)	65 (260)	449	3.21	Satisfactory
Partnerships with other cooperatives	7 (7)	18 (36)	55 (165)	60 (240)	448	3.20	Satisfactory
Periodic member training sessions	13 (13)	17 (34)	41 (123)	69 (276)	446	3.19	Satisfactory
Joint farm maintenance	23 (23)	27 (54)	31 (93)	59 (236)	406	2.90	Satisfactory
Penalties for late payment of loans	28 (28)	29 (58)	51 (153)	32 (128)	367	2.62	Satisfactory
Annual leadership tenure (two years)	92 (92)	26 (52)	12 (36)	10 (40)	220	1.57	Not Satisfactory
Partnership with the government	57 (13)	63 (126)	11 (33)	9 (36)	208	1.49	Not Satisfactory
Insurance schemes	102 (102)	38 (76)	0 (0)	0 (0)	178	1.27	Not Satisfactory
Grand mean = 2.76							

Source: Field survey.
Note: Mean ≥ 2.5 = strong techniques; mean < 2.5 = weak techniques.
Cooperative management technique index = 0.69 (high impact).

3.5. Constraints Facing Extension Activities

The various constraints facing extension activities perceived by the farmers in the study area are presented in Table 7. Out of the 12 constraints examined in the study, the farmers perceived ten to be serious. They include poor training sessions by extension agents ($\bar{x}$ = 2.70), insufficient training kit ($\bar{x}$ = 2.62), insufficient field allowance ($\bar{x}$ = 2.53), absence of mobility ($\bar{x}$ = 2.49), poor linkage with research bodies ($\bar{x}$ = 2.45), slow response to identified problems ($\bar{x}$ = 2.41), weak continuity of projects by new staff ($\bar{x}$ = 2.39), inadequate current farm technology dissemination ($\bar{x}$ = 2.30), absence of field accommodation ($\bar{x}$ = 2.25), and inadequate communication equipment and technologies ($\bar{x}$ = 2.21). The two less serious constraints were language barrier ($\bar{x}$ = 1.57) and embezzlement of funds ($\bar{x}$ = 1.13).

The use of vernacular in communities has eliminated the language barrier. Adequate empowerment and mobilization of the extension workers is of paramount importance if he/she is to perform effectively since constraints seriously limit agricultural advancement (Gbigbi & Ovharhe, 2016; Gbigbi, 2021). Adeniji, Ega, Adeniyi, Ugwu, and Balogun (2006) reported that inefficiency in extension service delivery is caused by irregular payment of travel claims, unmotivated field staff, reduced training sessions for village extension workers, and reduced technology review meetings.

Table 7. Responses to constraints facing extension activities.

Constraint	NS (1)	S (2)	VS (3)	Total Score	Mean	Remark
Poor training sessions by extension agents	0 (0)	42 (84)	98 (294)	378	2.70	Serious
Insufficient training kit	0 (0)	52 (104)	88 (264)	368	2.62	Serious
Insufficient field allowance	8 (8)	50 (100)	82 (246)	354	2.53	Serious
Absence of mobility	0 (0)	71 (142)	69 (207)	349	2.49	Serious
Poor linkage with research bodies	12 (12)	56 (112)	73 (219)	343	2.45	Serious
Slow response to identified problems	0 (0)	83 (166)	57 (171)	337	2.41	Serious
Weak continuity of projects by new staff	0 (0)	85 (170)	55 (165)	335	2.39	Serious
Inadequate current farm technology dissemination	2 (2)	94 (188)	44 (132)	322	2.30	Serious
Absence of field accommodation	12 (12)	81 (162)	47 (141)	315	2.25	Serious
Inadequate communication equipment and technologies	10 (10)	90 (80)	40 (120)	310	2.21	Serious
Language barrier	85 (85)	30 (60)	25 (75)	220	1.57	Not serious
Embezzlement of funds	122 (122)	18 (36)	0 (0)	158	1.13	Not serious
Grand mean = 2.25						

Source: Field survey.
Note: Mean ≥ 2.0 = serious constraints; mean < 2.0 = weak constraints. Constraint index = 0.75.

3.6. Difference in Constraints Experience among Rice Farmers Based on Their Socioeconomic Backgrounds

Table 8 shows the chi-square test results of the difference in constraints experience between rice farmers given their socioeconomic backgrounds. The results revealed that there is a significant difference between the age category (years), crops being farmed and constraints (X^2 = 12.755; P < 0.05). The results also revealed that there is a significant difference between farming experience (years), crops being farmed and constraints (X^2 = 13.632; P < 0.01), and the number of years spent in school, crops being farmed and constraints (X^2 = 11.883; P < 0.01). The higher the age and farming experience, the better the rice farmers are able to overcome the constraints and challenges facing the enterprise. Based on these results, which do not correspond with Ovharhe (2016), who conducted a similar study with cassava, the null hypothesis, which stated that there is no significant difference in constraints experience between rice farmers given their socioeconomic background, is rejected.

Table 8. Responses to difference in constraints experienced among rice farmers given their socioeconomic background.

Variable	Total Pearson Chi-square	Fisher's Exact Test	Df	Asymp. Sig. (2-tailed)
Age category (years), crops being farmed and constraints	12.755[a]**	-	4	0.013
Farming experience (years), crops being farmed and constraints	13.632[a]***	-	3	0.003
Number of years spent in school category, crops being farmed and constraints	11.883[a]***	-	2	0.003
Farm income category, crops being farmed and constraints	-	0.601	1	0.302

Note: *** significant at the 1% level of probability; ** significant at the 5% level of probability.

4. CONCLUSION

This study has generated useful results and discussions. It revealed that more married male farmers dominate rice farming on a small-scale production level. They rely more on neighbors, friends, cooperative members and fellow farmers as a means of information dissemination than extension workers who are inadequate in the conduct of their

activities. Self-help and cooperative management techniques used by farmers were highly rated. The majority of the limitations facing extension activities perceived by the farmers are serious, such as poor training sessions by extension agents, insufficient training kits and field allowances, absence of mobility, and poor linkage with research bodies. The implication is that these limitations have jeopardized their efforts and contributed to the poor functionality among rice farmers' cooperatives in the study area. The activities of the individual groups culminated to general cooperative activities.

The study therefore makes the following recommendations based on the findings and suggests policy implications as a back-up for effective functionality of agricultural extension activities:

i. Male farmers being the domiciliary factor is not sufficient, efforts should be made to incorporate female farmers and youths in the rice production industry. Enactment of a policy encouraging women and youths to venture into rice production is suggested. This will increase the scale of rice farming, food security, income generation, and will to some extent curb youth restiveness.
ii. The reliance on other farmers for information dissemination over extension workers in this technological age is discreditable. For proper functionality of extension workers, there should be policies on holistic administrative and welfare package provision to ensure that set goals are deliverable.
iii. Self-help and cooperative management techniques used by the rice farmers were commendable. Notwithstanding, for the sustainability of best practices, there is a need to revamp the policy on annual agricultural produce exhibition and award ceremonies. This will prompt healthy competition among rice farmers and drive the extension workers toward better functionality.
iv. Regarding constraints facing extension workers leading to poor functionality in agricultural extension activities, as a policy there should be a consistent practice of capacity building locally and internationally, which will expose personnel to contemporary issues in agricultural extension advancement.

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